

**Committee to Bridge the Gap * Friends of the Earth * Greenpeace International *
Illinois Peace Action * Illinois Public Interest Research Group * Military
Production Network * Natural Resources Defense Council * North Suburban
Peace Initiative * Nuclear Control Institute * Nuclear Energy Information Service
* Nuclear Information and Resource Service * Physicians for Social Responsibility
* Prairie Alliance * Public Citizen * Rocky Mountain Institute * Safe Energy
Communication Council * Sierra Club * Sinnissippi Alliance for the Environment
* U.S. Public Interest Research Group**

May 19, 1997

Mr. James J. O'Connor
Chairman and Chief Executive Officer
Commonwealth Edison Company
PO Box 767
Chicago, IL 60690-0767

Dear Mr. O'Connor:

On behalf of 19 national and local public-interest organizations, we are writing to request a meeting with you concerning Commonwealth Edison's plans to lead an international consortium in bidding for Department of Energy (DOE) contracts to manufacture surplus warhead plutonium into mixed oxide (MOX) fuel and to use this fuel in a number of ComEd's nuclear power plants. Representatives from some of our organizations will be in Chicago for three days beginning May 27. For the reasons elaborated in this letter, and in the attached critique of ComEd's operational difficulties relevant to use of MOX fuel, we request a meeting to discuss this urgent matter with you.

We are concerned that ComEd fails to appreciate the unique hazards and costs that use of plutonium fuels entails (see attachment). ComEd's insistence, reported in a 1994 General Electric study, that MOX fuel at reactors be exempted from special safeguards and security requirements, demonstrates either an absence of knowledge or a lack of concern about the security risks of bomb-usable nuclear fuel.

Also, because ComEd's nuclear program has resulted in a reported \$9.9 billion in so-called "stranded costs"---more than any other U.S. utility---you should be extremely reluctant to enter into a major new program that can be expected to increase operation and maintenance costs in unpredictable ways. You should not expect that these increased costs will necessarily be offset by federal funds. Indeed, far from being a money-maker, use of MOX fuel could jeopardize ComEd's long-term competitive position in a deregulated electricity market.

Beyond our general concerns about the use of plutonium as fuel in civilian reactors, our organizations have very specific concerns about ComEd's participation in a MOX program. The NRC has made clear that ComEd's nuclear division suffers from serious, long-standing managerial problems that have yet to be resolved, jeopardizing ComEd's ability to operate all 12 of its nuclear-power reactors safely. NRC also found an overemphasis by ComEd on developing new programs rather than focusing on good implementation of existing ones.

We are concerned, therefore, that ComEd's participation in the MOX consortium can only serve to detract from its efforts to resolve these problems. Given NRC's findings, ComEd is an entirely inappropriate candidate for participation in any MOX plutonium disposition program, and we urge ComEd to withdraw itself from consideration for manufacture and use of MOX fuel. We have informed NRC Chairman Shirley Ann Jackson that were ComEd actually to apply for license amendments allowing it to irradiate MOX fuel, a number of our organizations would vigorously oppose ComEd's applications.

We hope you will agree to meet with us to discuss this extremely serious matter. Please let us know if the week of May 27 is convenient or if you prefer an alternate date.

Sincerely,

Paul Leventhal
Nuclear Control Institute

Thomas B. Cochran
Natural Resources Defense Council

David Kraft
Nuclear Energy Information Service

Daniel Becker
Sierra Club

Tom Clements
Greenpeace International

Robert W. Tiller
Physicians for Social Responsibility

Kevin Martin
Illinois Peace Action

Cathy Truitt
Prairie Alliance

Diane Brown
Illinois Public Interest Research Group

Daniel Hirsch
Committee to Bridge the Gap

Amory Lovins
Rocky Mountain Institute

Bill Magavern
Public Citizen

Anna Aurilio
U.S. Public Interest Research Group

Jim Adams
Safe Energy Communication Council

Michael Mariotte
Nuclear Information and Resource Service

Courtney Cuff
Friends of the Earth

Stanley Campbell
Sinnissippi Alliance for the Environment

Maureen Eldredge
Military Production Network

Joyce Platfoot
North Suburban Peace Initiative

cc: Samuel Skinner, President, Commonwealth Edison
Thomas Maimon, Executive Vice-President

Michael J. Wallace, Senior Vice-President for Nuclear Strategic Services
Shirley Jackson, Chairman, Nuclear Regulatory Commission
Federico Peña, Secretary of Energy

Attachment

Attachment

PLUTONIUM FUEL: MORE THAN COMMONWEALTH EDISON CAN HANDLE

Since March 1996, the NRC has fined ComEd a million dollars for violations at all six nuclear sites where its 12 nuclear power reactors are located. Six of the 12 reactors are currently on NRC's "Watch List," including the two LaSalle plants that ComEd is proposing for the MOX program. The Dresden plants have been on NRC's watch list for seven of the past ten years, longer than any other plants in the country.

Serious Safety Problems. Utilization of weapons-grade plutonium in MOX fuel for light-water reactors will increase the complexity of reactor operations, and will result in an unavoidable degradation of key safety margins, such as the excess control capacity needed to shut down a reactor safely ("excess shutdown margin"). Consequently, any utility that wishes to take on the additional challenges of using MOX will have to increase substantially the attention and resources devoted to safety. Such utilities need a demonstrated ability to adapt efficiently to major changes in operating procedure, and to respond effectively to unusual operating events.

ComEd's record to date provides little assurance that it can meet these fundamental criteria:

- In 1994, what ComEd itself termed worker "horseplay" at LaSalle resulted in radiation contamination. In 1996, faulty repair work led to blockage of service water system intakes by foreign material, a situation which could have impaired the effectiveness of emergency core cooling in an accident.
- In 1996 and 1997, the Braidwood plant, also designated by ComEd for MOX use, experienced configuration-control problems, engineering and maintenance violations, and fire-protection violations.
- A pipe break at Dresden in 1994 released 55,000 gallons of contaminated water into the basement of the containment. NRC stated that if a similar accident had occurred at the spent fuel pool, it could have released huge amounts of radiation. In 1996, the feedwater at Dresden-3 failed, leading NRC Commissioner Kenneth Rogers to comment that he was "disgusted" with ComEd's performance.
- On two separate occasions in 1994, fire broke out at the Zion plant. Also in 1994, Zion safety monitors were "accidentally" disabled for three days. In 1996, multiple violations of procedure resulted in NRC fines. In January 1997, Zion was placed on the NRC's Watch List for the second time in five years. Procedures again were violated at Zion-1 in 1997 when operators attempting to reduce the power level of the reactor accidentally shut it down, and then tried to correct their mistake by improperly withdrawing control rods.

Lack of Demonstrated Improvement. In March, ComEd submitted to NRC a plan for improving the operation of its nuclear plants. Unfortunately, a number of previous ComEd pledges to NRC to improve performance have gone unfulfilled. NRC Chairman Shirley Jackson commented in an

April meeting with ComEd officials that, "[g]iven the cyclical nature of poor performance at some Commonwealth Edison nuclear stations and the apparent inability to effectively implement long-term corrective actions, it appears that one fundamental question needs to be answered: What is different this time?"

Chairman Jackson's question is hard to answer because ComEd's latest plan looks very much like proposals it has promised to implement over the past several years. Joseph Callan, NRC's executive director of operations, stated that "[t]he issue, again, is the implementation aspects of the program, and if we just go on history, then we shouldn't have much confidence, quite frankly. The performance of Commonwealth Edison over the years in implementing programs has been fairly dismal...there is very little that they can point to themselves to give us confidence that this time, these programs...will work at Commonwealth." Callan further noted that ComEd's failure to improve performance is straining NRC's limited enforcement resources, with the Zion, Dresden and LaSalle stations each receiving almost 10,000 hours of direct inspection time, "roughly twice the inspection effort that average two-unit facilities would be receiving."

One of the greatest concerns is that ComEd's participation in the MOX program could detract from its efforts to improve safety. A 1992 NRC staff paper isolated one of the "probable root causes" of ComEd's problems to be

[I]limited effectiveness of corporate level oversight of Nuclear Operations [which] resulted in divergence of quality among the sites. The number of corporate senior managers and staff providing oversight of operations and maintenance for the CEC [ComEd] nuclear stations has been insufficient and less than that of consistently good performing licensees. *Extensive participation in various industry groups and initiatives has further strained management resources.* [emphasis added]

NRC staff also noted that "[t]he corporate organization seems to overemphasize the development of new programs rather than focusing on good implementation of existing programs. When resources are needed to implement new programs, this stresses CEC's ability to complete existing programs." Yet, despite this warning, Michael Wallace, senior vice president and chief nuclear officer at ComEd, has assumed the chair of the Nuclear Energy Institute's Plutonium Working Group, an industry group, and in that capacity is leading the industry's effort to press for use of warhead plutonium in MOX fuel---the very type of "new program" that NRC is trying to steer ComEd away from.

Security and Safeguards. According to a 1994 General Electric study, ComEd's "position is that the MOX fuel bundles should be treated as normal reactor fuel once inside the facility protected area, and that existing plant security plans and handling processes are sufficient for protection of the fuel. This condition can be accommodated by modifying the existing DOE regulations to exempt the MOX fuel for this program from the current safeguards requirements." Such a position is in conflict with the National Academy of Sciences' 1995 plutonium disposition study, which found an increased potential for diversion and theft of plutonium:

The biggest risks of these kinds involve the steps before the WPU [weapons plutonium] has been either irradiated in a reactor or mixed with radioactive wastes. *In order to ensure that the overall process reduces net security risks, an agreed and stringent standard of security and accounting must be maintained throughout the disposition process, approximating as closely as practicable the security and accounting applied to intact nuclear weapons.* [emphasis added]

Given that weapons plutonium could be separated from fresh MOX fuel by straightforward chemical means, and that less than 12 pounds of plutonium is enough for a bomb that could destroy a city the size of Chicago, ComEd's cavalier attitude toward security arrangements for MOX fuel is unacceptable.

Stranded costs. According to recent independent estimates, ComEd is burdened by more "stranded costs" (investment costs the utility may not be able to recover from ratepayers in a deregulated market) than any other electric utility in the country (over \$9.78 billion). Also, a recent study projected that half its units are economically vulnerable to premature shutdown. We are concerned

that ComEd's financial weaknesses will ultimately be a drain on the financial resources of a plutonium disposition program. In fact, according to a 1994 plutonium disposition study conducted by General Electric, ComEd would require "financial incentives...sufficient to offset the business risks of committing to the [MOX] program." Ultimately, hundreds of millions of dollars in federal subsidies could be required to keep ComEd's nuclear power plants afloat for the duration of their plutonium disposition mission.

Operator Competence. Last August, a forthcoming operator exam was found jammed in a photocopier at the Dresden plant, prompting the NRC to investigate whether there was attempted cheating on the exam. Last month, more than three-fourths (25 out of 31) of the operators tested at the LaSalle plant failed a test of their ability to handle "abnormal operating procedures" at the reactor---one of the plants that ComEd has proposed for MOX fuel use. The training program has been canceled and is being redesigned. A ComEd official recently told the NRC that retraining all of ComEd's 600 operators will take two years.

Since ComEd already faces the lengthy, expensive, and complex task of putting the operation of its 12 nuclear power reactors in good order, and since NRC has made it clear it will accept not mere improvement, but only sustained improvement over a period of years, we urge that ComEd should withdraw itself from consideration for the program to manufacture and use MOX fuel.

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